III. REMARKS

1. Claims 40, 42, 44-49, 52, 54, 55, 58-65, 68, 70-73, 76-83, 86-91, 94-99, 102, 105, 108-116 remain in the application. Claims 1-39, 41, 43, 50, 51, 53, 56, 57, 66, 67, 69, 74, 75, 84, 85, 92, 93, 100, 101, 103, 104, 106, 107, and 117 have been cancelled without prejudice. Claims 118-131 are new. Claims 40, 42, 44-49, 52, 54, 55, 58, 59-65, 68, 70-73, 76-83, 87-91, 94, 97-99, 102,, 105, 108, 111, and 114 have been amended.

The amendments to the claims are not limiting, are not made for reasons related to patentability, and do not raise issues of estoppel.

2. Applicants respectfully submit that claims 40, 45-49, 55, 58, 61-64, 76, 79-82, 91, 94-96 and 111-113 are patentable over the combination of Andrew (US 6,563,958, "Andrew") and Nishi (US 6,275,533) under 35 USC 103(a).

The combination of Andrew and Nishi fails to disclose or suggest performing a prediction for at least one pixel value of a second block, the second block adjacent to the first decoded image block, wherein the prediction is performed based on the modified pixel value of the first decoded image block by the filtering operation, as recited by claim 40. Independent claims 58, 76, 94, 97, 98, 108, and 111 all recite similar features.

Andrew presents a method and apparatus for filtering boundaries between blocks of a digital image. The method decompresses blocks of a compressed image and filters the blocks with a one-dimensional filter across boundary regions between adjacent blocks (see abstract).

In one embodiment of Andrew described between column 3, line 39 and column 4, line 3, selected blocks of the digital image are decompressed and then, only after all selected blocks have been decompressed, filtering is applied to the boundaries between the decoded blocks (see column 3, line 64 to column 4, line 3, as well as Figure 2).

In an alternative embodiment of Andrew described between column 5, lines 36 and 64, the block boundary filter is applied on a block-by-block basis such that when a particular image block is decompressed, block boundary filtering is applied to those edges of the block that have boundaries with already decoded blocks before any further image blocks are decompressed (see Figure 3).

However, there is no disclosure in Andrew related to performing a prediction for at least one pixel value of a second block, the second block adjacent to the first decoded image block, wherein the prediction is performed based on the modified pixel value of the first decoded image block by the filtering operation.

Nishi discloses an image processing method in which an image signal is divided into plural image signals corresponding to plural blocks into which an image space formed by the image signal is divided. This method comprises the steps of transforming an image signal of a target block to be coded into frequency components by frame-by-frame frequency transformation; _generating prediction values of frequency components_ of the target block with reference to frequency components of a block which has already been coded; and coding difference values between the frequency components of the target block and the prediction values thereof (see abstract).

In contrast, claim 40 recites:

> performing a filtering operation across a block boundary between the first decoded image block and a previously decoded image block adjacent to the first decoded image block such that the _pixel value_ of at least one decoded pixel in the first decoded image block is modified by the filtering operation;

> _performing a prediction_ for at _least one pixel value of a_ second block, the second block adjacent to the first decoded image block, wherein the prediction is performed based on the _modified pixel value of the_

24

first decoded image block by the filtering operation. (emphasis added).

There is no teaching or suggestion in Nishi that a prediction for at least one pixel of a currently coded block is performed based on modified pixel values of an adjacent block, wherein the modified pixel values are obtained after <u>decoding and performing a filtering operation</u>. Nishi discloses that the prediction values of a <u>frequency component</u> of the target block are generated with reference to <u>frequency components</u> of an adjacent block. Thus, the combination of Nishi and Andrew neither operates the same way as in the independent claims nor provides the same result. Therefore, Nishi and Andrew, considered individually or in combination, fail to teach or suggest at least one limitation of the independent claims.

At least for these reasons, the combination of Andrew and Nishi fails to render independent claims 40, 58, 76, 94, 97, 98, 108, and 111, and dependent claims 45-49, 55, 61-64, 79-82, 91, 95, 96, 112, and 113 unpatentable.

3. Applicants respectfully submit that claims 41-44, 50, 59, 60, 77, and 78 are patentable over the combination of Andrew, Nishi and Osa et al. (US 6,496,505, "Osa") under 35 USC 103(a).

Claims 41-44, 50, 59, 60, 77, and 78 depend from claims 40, 58, or 76. Osa fails to supply the features missing from Andrew and Nishi as argued above, that is, performing a prediction for at least one pixel value of a second block, the second block adjacent to the first decoded image block, wherein the prediction is performed based on the modified pixel value of the first decoded image block by the filtering operation.

Therefore the combination of Andrew, Nishi, and Osa fails to render claims 41-44, 50, 59, 60, 77, and 78 unpatentable.

4. Applicants respectfully submit that claims 52, 54, 65, 67 - 73, 83 - 90, 97 - 99, 102 and 105 are patentable over the combination of Andrew, Nishi, and Keith et al. (US 5,419,513, "Keith").

Like Andrew and Nishi, Keith fails to disclose or suggest performing a prediction for at least one pixel value of a second block, the second block adjacent to the first decoded image block, wherein the prediction is performed based on the modified pixel value of the first decoded image block by the filtering operation.

Therefore claims 52, 54, 65, 67-73, 83-90, 97-99, 102 and 105 are not rendered unpatentable by the cited combination.

5. Applicants respectfully submit that claims 56, 74, and 92 are patentable over the combination of Andrew, Nishi and Fukuda et al. (US 6,434,275, "Fukuda") "Fukuda") under 35 USC 103(a).

Claims 56, 74, and 92 depend from claims 40, 58, or 76. Fukuda fails to provide the features missing from Andrew and Nishi as argued above, specifically, performing a prediction for at least one pixel value of a second block, the second block adjacent to the first decoded image block, wherein the prediction is performed based on the modified pixel value of the first decoded image block by the filtering operation.

At least for these reasons claims 56, 74, and 92 are patentable over the combination of Andrew, Nishi, and Fukuda.

6. Applicants respectfully submit that claims 57, 75, and 93 are patentable over the combination of Andrew, Nishi and Zhou (US 6,236,764) under 35 USC 103(a).

Claims 57, 75, and 93 depend from claims 40, 58, or 76. Zhou fails to supply the features of these claims missing from Andrew and Nishi and therefore the combination of Andrew, Nishi and Zhou fails to render claims 57, 75, and 93 unpatentable.

7. Applicants respectfully submit that claims 100, 103, and 106 are patentable over the combination of Andrew, Nishi, Keith, and Fukuda under 35 USC 103(a).

Claims 100, 103, and 106 depend from claims 52, 65, or 83. The combination of Keith and Fukuda fails to provide the features of the independent claims missing from Andrew and Nishi. At least for these reasons claims 100, 103, and 106 are patentable over the combination of Andrew, Nishi, Keith, and Fukuda.

8. Applicants respectfully submit that claims 101, 104, and 107 are patentable over the combination of Andrew, Nishi, Keith, and Zhou under 35 USC 103(a).
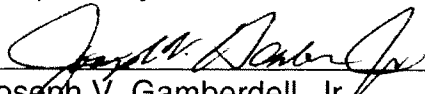
Claims 101, 104, and 107 depend from claims 52, 65, or 83. The combination of Keith and Zhou fails to provide the features of claims 52, 65, or 83 missing from Andrew and Nishi. Therefore claims 101, 104, and 107 are patentable over the combination of Andrew, Nishi, Keith, and Zhou.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

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Respectfully submitted,

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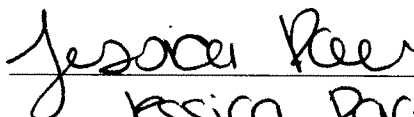Reg. No. 44,695

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